

**EMPLOYEE INVOLVEMENT IN EMS/ISO14001  
AND ITS SPILLOVER EFFECT IN CREATING  
CONSUMER ENVIRONMENTALLY RESPONSIBLE  
BEHAVIOR**

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SPILLOVER EFFECT IN CREATING CONSUMER  
ENVIRONMENTALLY RESPONSIBLE BEHAVIOR**

**by**

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My first encounter with my supervisor was a memorable one. She said: “Welcome to a long and lonely journey”. It made me anxious and I was asking myself, “am I ready for this long and lonely journey?” However I know now it was just a “shock and awe” treatment just to wake me up and prepare myself mentally. However, I thank God Almighty; it has never been for me, a lonely journey. For I was blessed to have encountered with many, who were always willing to lend a helping hand and at times, a shoulder to rest upon. And now, I would like to acknowledge those people who were with me all along the way, in this long and arduous journey of academic pursuits.

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PENGLIBATAN PEKERJA DALAM SPA / ISO14001 DAN KESAN LIMPAHAN DALAM  
MELAHIRKAN TINGKAHLAKU PENGGUNA YANG BERTANGGUNGJAWAB  
TERHADAP ALAMSEKITAR.

ABSTRAK

Kajian ini memberi jawapan kepada satu persoalan utama iaitu sama ada pelaksanaan satu sistem pengurusan yang komprehensif dan menyeluruh seperti Sistem Pengurusan Alamsekitar (SPA) boleh mengukuhkan sikap-kerja dan norma yang mesra-alamsekitar dan sama ada sikap dan norma tersebut boleh melimpah dalam bentuk tingkah-laku diluar organisasi. Penglibatan pekerja (PP) yang sememangnya satu elemen yang penting di dalam pelaksanaan SPA telah dikenalpasti sebagai variabel bebas. Variabel bersandar pula adalah niat membeli suatu produk mesra-alam (NB). Keperihatinan ekologi pekerja (KE) sebagai natijah langsung penglibatan dengan pelaksanaan SPA akan berperanan sebagai pengantara kepada proses limpahan ini. Sementara kesedaran dan kepercayaan terhadap eko-label berwibawa adalah dijangka mengukuhkan lagi pengaruh sikap dan pengetahuan tentang alamsekitar (dua dimensi KE) ke atas niat membeli suatu produk hijau. Unit analisa untuk kajian ini adalah pekerja didalam organisasi yang melaksanakan SPA dan mempunyai persijilan ISO14001. Sejumlah 526 responden dari 46 organisasi telah menyertai survey ini. Dapatan dari analisa regresi berganda mengesahkan keujudan fenomena limpahan diantara “penglibatan pekerja dengan pelaksanaan SPA” dan “niat membeli produk hijau”. Dua dari dimensi PP, iaitu Kuasa dan Latihan didapati menyumbang secara signifikan kepada proses tersebut. Bukti-bukti empirikal dari kajian ini juga mengesahkan peranan sikap terhadap perlindungan alamsekitar dan pengetahuan konkrit sebagai perantara (mediator). Dapatan dari kajian ini mengukuhkan lagi andaian teoretikal yang

menunjangi kerangka penyelidikan ini yang menyatakan tingkahlaku (PP) mengesani sikap (KE) yang kemudian nya menghasilkan kesan limpahan dalam bentuk tingkahlaku yang lain pula. Dalam ertikata lain, sebagai pengantara, sikap terhadap perlindungan alamsekitar dan pengetahuan konkrit adalah pra-syarat atau penghubung di antara dua kategori tingkahlaku mesra-alam yang berbeza. Akhir sekali, dapatan kajian ini juga menunjukkan bahawa keyakinan dan kesedaran terhadap eko-label terbukti mempunyai kesan penyama-rataan untuk mengukuhkan hubungan antara keperihatinan alamsekitar dan niat membeli. Sebagai rumusan, kajian ini adalah satu langkah kedepan untuk lebih memahami bagaimana sebuah organisasi menyumbang kepada pembentukan sikap dan norma yang positif terhadap alamsekitar dikalangan pekerja-pekerja melalui penglibatan bersungguh-sungguh mereka dengan perlaksanaan SPA. Sikap dan norma-norma yang dibentuk melalui penglibatan mereka secara praktikal di dalam sesebuah organisasi juga memberi manfaat kepada masyarakat secara umum apabila di masa yang sama mereka juga memberi keutamaan terhadap keputusan-keputusan sebagai pengguna yang lebih bertanggungjawab terhadap alamsekitar semasa di luar organisasi. Dapatan kajian ini juga boleh dijadikan asas untuk terus menggalakan organisasi-organisasi, bukan sahaja dari sektor swasta, malah juga dari sektor awam dan pendidikan untuk melaksanakan SPA. Kelebihan perlaksanaan SPA, sekira nya melibatkan pengurusan dan pekerja yang bersungguh-sungguh, pasti akan memberikan kesan yang positif terhadap usaha-usaha membangunkan masyarakat lestari yang lebih bertanggungjawab terhadap alamsekitar. Ini selari dengan dasar kerajaan untuk menyerlahkan modal insan yang kamil sebagaimana yang dinyatakan dalam RMK-9. Kajian ini juga memberi dokongan kepada penggunaan eko-label kebangsaan dan menjadi titik-asas untuk mempelupori penggunaan nya dalam inisiatif pemasaran strategik tempatan.

# EMPLOYEE INVOLVEMENT IN EMS/ISO14001 AND ITS SPILLOVER EFFECT IN CREATING CONSUMER ENVIRONMENTALLY RESPONSIBLE BEHAVIOR

## ABSTRACT

This study answers the main question of whether the implementation of a comprehensive and pervasive management system such as the Environmental Management System (EMS) could reinforce work attitude and norms that are eco-friendly and whether the same attitude and norm would spill out into behavior outside the organization. Employee Involvement (EI) which is an embedded element in the successful implementation of the EMS has been identified as the independent variable. Purchase intention for an environment friendly product (PI) is the dependent variable. Employee ecological concern (EC) as the direct outcome of their involvement with the implementation of the EMS would mediate the entire spillover process. While awareness and trust for an established eco-label were expected to positively strengthen the effect environmental attitude and knowledge (as dimensions of EC) has on the intention to purchase the green product. The units of analysis for this study are employees working in organizations that have successfully implemented the EMS and obtained the ISO14001 certification. A total of 526 respondents from 46 organizations participated in the survey. The outcome of the multiple regressions analysis confirms the existence of a spillover phenomenon between “*employee involvement with the implementation of the EMS*” and “*purchase intention of a green product*”. Two dimension of EI, that is Power and Training contributed significantly to the process. Empirical evidence from this study also confirmed the role of attitude toward environmental protection and concrete knowledge as mediators. This finding further strengthen the theoretical assumption that underpin this research framework which states that behavior (EI) causes attitude (EC)

which then result in the spillover of another behavior (PI). In other word, attitude toward environmental protection and knowledge are pre-requisite or a link between two different behavior categories. Finally, the results also showed that both trust and awareness of eco-label was proven to have a moderating effect of strengthening the relationship between environmental concern and purchase intention.

In conclusion, this study is a move forward to further understand how organizations could contribute in fostering positive environmental attitude and norms among their employees by getting them to be highly involved with the implementation of the EMS. These attitudes and norms would also have a spillover benefits for society at large through preferences shown for environment responsible consumer choices that they make outside the organization. This finding could be the basis to further encourage organizations, not only in the private sector, but also in the public and education sector to adopt the EMS. The benefits, if implemented with true involvement from management and employees, would surely give a positive influence in the effort to develop a sustainable environment responsible community. This would also compliment the government's policy to further enhance holistic human capital as mentioned in the 9<sup>th</sup> Malaysia Plan. The study also lends strong support to the relevance of the existing national eco-labels and act as a cornerstone to further explore its use in local strategic marketing initiative.



## **CHAPTER 1**

### **INTRODUCTION**

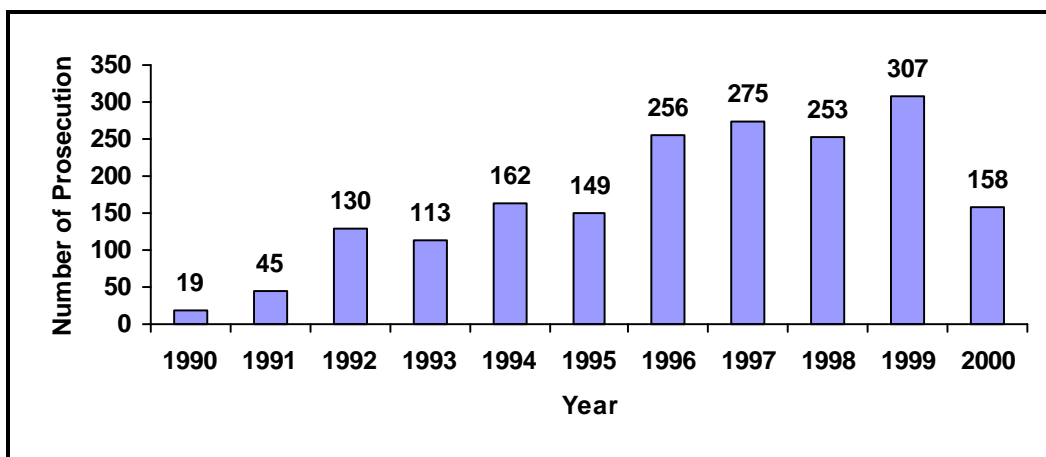
#### **1.0 Introduction**

Environmental problems -- the greenhouse effect and global climate change, depletion of the Earth's protective ozone layer, the large scale clearing of tropical rain forests and the resulting loss in genetic diversity, regional air pollution, and others -- are the result of human behavior. The common recognition of this fact has encouraged the use of the science of human behavior to further understand the roots of the problems and create strategies for solving them. Numerous books and journals have been published to establish the link between environmental science and behavioral science, developing frameworks for addressing the key questions about human behavior that harm the environment, summarizes knowledge from psychology and related field about these behaviors, and uses that knowledge to point to realistic solutions. Even though these behavioral components have, in the past, been largely ignored by natural scientists, engineers and government policymakers, in recent decades the importance of these components has now been widely recognized. Not only are they now examining the chemistry, biology, meteorology, physics, ecology or economics of environmental problems; they have also accepted the importance of the behavioral dimensions of this phenomenon and acknowledged it as a worthy cause for an in-depth study, such as attempted through this present dissertation.

#### **1.1 Background of the Study**

One of the most relevant problems Malaysia is facing today is the deterioration of the natural environment and of natural resources. The national statistics showed that the state of some of the Malaysian environment is rather stressful. Urban air quality, river

water quality, deforestation of tropical forest, haze due to open burning, overflowing landfills, household waste and hazardous waste are some of the example of environmental issues faced by the nation. The air quality index particularly in the urban areas has deteriorated and falls under moderate levels with API (Air Pollution Index) of slightly above 50. Since 1995, the number of clean river has dropped from 48 to 34 rivers but the number of much polluted rivers has decreased slightly in the same period from 14 to 12 (Department of Statistics Malaysia, 2001). The legal action taken on premises and companies had increased starkly from 149 in 1995 to 307 in 1999 (Figure 1.1). Though the numbers have drastically decrease since, in the year 2000 a total of 158 premises and companies were taken to court and fined a total of RM3.5 million which represented an increase of 29% in fines from the previous year. (Laporan Jabatan Alam Sekitar, 2000). However, the number of cases since then is again steadily on the rise with 109, 129 and 208 cases from 2002, 2003 and 2004 respectively (Laporan Jabatan Alam Sekitar, 2004).



*Figure 1.1* Number of Court Cases, 1990 – 2000.  
(Source: Laporan Tahunan Jabatan Alam Sekitar, Malaysia; 2000).

Solid domestic waste is one of the major environmental problems faced by most municipalities in the country particularly in urban areas. The generation rate of waste is

approximately 0.8kg/day per person where 98% of it is municipal solid waste (9<sup>th</sup> Malaysia Plan, 2006). Presently there are only 140 landfills sites throughout the country. These open dumping grounds are the source of various environmental problems such as the production of methane and carbon dioxide which are gases that contribute directly to the adverse climate changes, surface water pollution and also leachate contamination of groundwater (Siti Hafsyah et al., 2006). Despite rigorous campaigns of recycling, the attainment of recycling rate has increased from 1-2 percent in 1997 to merely 5 percent in 2001 (Aini and Roslina, 2002). This concern for environmental deterioration has compelled the government to formulate a more comprehensive National Environmental Policy, which provides strategic guidelines for coping with this problem, which among others, is by seeking to integrate environmental considerations into development activities and in all related decision-making processes either in the public or in the private sectors. (Department of Environment Webpage: <http://www.jas.sains.my>). In anticipating serious future challenges, the Malaysian government has allocated RM302 million to be distributed to local authorities throughout the country for landfill rehabilitation, recycling campaign and waste management system (RMK-9, 2006). As an immediate response for the near future, RM179 million has been allocated in the Budget 2007 for the improvement of the waste management system, including the landfill rehabilitation programs.

A legislation in the form of Environmental Quality Act was passed by Parliament since 1974 (Amendments 1985, 1996) followed a year later by the establishment of the Department of Environment. Through the Promotion Act 1986, Pioneer Status (PS)/Investment Tax Allowance (ITA) will be given out to any companies which carry out activities such as forest plantation project, proper storage, treatment and disposal of toxic and hazardous waste, waste recycling activities, the conservation of energy, utilizing biomass as a source of energy and also on specific manufacturing related

activities. Acknowledging that Malaysia has a set of good legal guidelines in matters either directly or indirectly relating to environmental protection, scholars have also highlighted the ways and means to improve and further enhance its enforcement on irresponsible defaulters (Siti Hafsyah et al. 2006).

In the 8th Malaysia Plan policies have been laid out to further enhance overall environmental management by conducting training programs to encourage firms to adopt companywide environmental management practices, including environmental costing, auditing, reporting and life cycle assessment, as well as ISO14001 (Eight Malaysia Plan, 2001-2005: p554). Decisions by the Malaysian government to include such legislative provisions for environmental management systems that are verifiable by auditing procedures demonstrates its seriousness in adopting the ISO 14000 standards in regulatory reform initiatives (Zulina, Muhamad and Mohd Nasir, 1999). In the recent 9th Malaysia Plan the government has further shown it's resolved by introducing the concept of environmental stewardship to ensure balance between socio-economic developmental needs and the physical environment. While greater focus will be placed in mitigating negative environmental effects at it source, emphasis will also be given to foster closer cooperation between stakeholders in addressing environmental concerns (RMK-9, 2006).

In tandem with the above efforts, environmental studies have also been integrated into formal and informal educational activities, from school to tertiary institutions. Since 1989, serious effort have been carried out by the Ministry of Education to review the school curricula at all levels and to ensure the multidisciplinary approach to environment and development issues be implemented successfully (Nor Azizah, 1997; Sham Sani, 2004). Collaborative programs between Department of Environment, Ministry of Education and local universities incorporating directly or indirectly the elements of environmental education through the integration of knowledge, skills and

environmental values in four areas, namely, Management, Curriculum, Co-Curriculum and Greening (Laporan Jabatan Alam Sekitar, 2004) Results from few studies involving Malaysian secondary school students and teachers have also shown positive results in terms of ecological concern, eventhough the level of behavioral commitment is still far from satisfactory (Aini, Fakhrul Razi, Laily and Jariah, 2003; Mohd Yusop Hadi et al., 2002).

Another very important contributor to public awareness of environmental issues is the numerous Non Governmental Organizations (NGOs) which includes Sahabat Alam Malaysia (SAM), Malaysian Nature Society, Consumer Association of Penang (CAP), Malaysian Society of Marine Science, Malaysia World Wildlife Federation, etc. The last two decades have witnessed the advent of many campaigns organized by these various groups to rally around the cause of conservation, fight for sustainable development and support for community right (Sahabat Alam Malaysia, 2001). The success of these groups has been at times very encouraging but the hurdle it has to overcome is ever growing and the only hope that could ensure the survival of its noble cause lies in the very core of its struggle: environmental awareness and its eventual significant ecological conduct among the general population. The government has also recognized the important role of NGOs as input providers for policy development, and has established the Malaysian Environmental NGOs (MENGOs) since 2002 in order to improve cooperation and integration efforts in raising awareness on environment and natural resource issues (RMK-9, 2006).

## **1.2 Response of the Business Community**

Undeniably, the single largest contributor to this environmental degradation is the business industry and the excessive consumer lifestyle it has to satisfy. However, even with the ever deteriorating environmental quality and the negative image of business as

the number one polluter, there is also widespread acknowledgement that business can also play a significant role in the advancement of a more sustainable society by turning itself green. The greening of these organizations could be associated with various functions of business such as marketing (Peattie, 1995; Polonsky, 1995; Straughan and Roberts, 1999), production (Kitazawa and Sarkis, 2000; Pesonen, 2001), accounting (Gonzalez et al., 2001; Wood, 1995), human resource training and development (Beard, 1996; Daily and Huang, 2001) or to a more fundamental change in strategic management orientation (Judge and Douglas, 1998; Rondinelli and Vastag, 1996). Another significant response of business organization is the adoption of the voluntary Environmental Management System (EMS) and its international recognition through the certification of the ISO14001. The ISO14001 is one of the most accepted standards within the Malaysian's business and manufacturing communities even though other standards have also been practiced by some local multinationals. The ISO14001 is also regarded as having the most positive impact on several dimension of organizational performance (Melnik, Sroufe, Calantone and Montabon, 2002; Nik Nazli and Maliah, 2002). This enthusiasm toward the EMS / ISO14001 in Malaysia can be seen through its sharp increase in membership, with only 4 companies in 1996 to 362 in December 2003, to 566 by January 2006 (<http://www.ecology.or.jp/isoworld/english/analy14k.htm>). Most of the companies that are certified are multinationals or export-oriented business where certification to EMS is mandatory or subtle requirement by their overseas clients or parent companies (Chen, 2002).

Almost all of the existing studies focusing on the impact of the implementation of ISO14001 are at the organizational level, such as strategic, tactical and reputation impact (Melnik et al., 2002), or its intended and unintended organizational consequences (Pulver, 2001), the benefits and costs in legal, commercial and social categories (Chin, Chiu and Tummala, 1999) and firm level environmental performance

and internationalization (Knudsen and Madsen, 2001). Studies on the impact of its implementation at individual (employee) level have, however, been scarce and limited; even though the importance of the employee attitude and behavior in determining its successfulness is very crucial, indeed not only for its own organizational performance but its potentially significant role in the development or advancement of a more sustainable society in general.

### **1.3 Problem Statement**

One of the prominent conclusions of the Earth Summit in Rio in 1992 was that “altering consumption patterns is one of humanity's greatest challenges in the quest for environmentally sound and sustainable development” (Sitarz, 1994, p. 39). Since then, strategies for the attainment of a sustainable consumption pattern has been on the agenda of a large number of international, national, and NGO conferences and meetings ([www.conferencealerts.com/environment](http://www.conferencealerts.com/environment)). However until now, most attempts to change consumer behavior in an environment friendly direction have focused on isolated habits (for instance on persuading consumers to participate in a recycling program, sharing of private transportation, preferences for organic produces, or use of energy saving light-bulbs) rather than on achieving general (overall) changes in value orientation and subsequent environment-friendly lifestyles. Some authors warned that this narrow focus on single behaviors and problems is inefficient and too slow, compared to the challenges ahead of us (Gray, 1985; Orlander & Thøgersen, 1995), and others have claimed that a too narrow focus often leads to the creation or worsening of environmental problems outside the intended focus (Jørgensen, 1989: cited from Thøgersen, 1999). Kilbourne and Polonsky (2004) consequently suggested that the focus should be to have consumer-directed environmental policy guided by the ambition to change overall consumption lifestyle patterns, not just specific limited behaviors. Most prominent is the

multidisciplinary approach to the education of the environment and development issues implemented throughout the entire formal educational system (Dzulkifli, 2005; Nabsiah and Ismail, 2003a, 2003b; Nor Azizah, 1997)

This study, however, intends to introduce another complementing effort, with an emphasis on aspects of the educative elements from an industry perspective, through the implementation of the Environmental Management System (EMS) which is organizationally both very pervasive and comprehensive in nature (ISO14001, 1996). Previous studies have showed that organizational practices that are being implemented and communicated does have some effect on employee work attitudes and values (Cleek and Leonard, 1998; McCabe, Trevino and Butterfield, 1996; Stead, Worrell and Stead, 1990). Jackson and Coolican (2003:788-789) argued this issue rather eloquently by saying that;

If we hope to impact society and the ways in which we all live together, we are obligated to consider how to positively impact the thinking and the behavior of individuals at all stages of life and in a variety of organizational settings. We choose to focus our energies on the organizational level, for this is often where people spend a majority of their time and one where there are established, either explicitly or implicitly, codes of behavior that are reinforced over time. If people are expected to behave respectfully and in a civil fashion, and if the organization intentionally promotes such behavior, the continuous, daily reinforcement of a respectful way of working together will often spill out into behavior outside of the organization.

In this study we have proposed an established and well-researched organizational construct of “employee involvement” to represent the employee sense of identity with the organization goal and strategies of promoting comprehensive environment-friendly practices (Guest and Peccei, 1992). The possibility that employee involvement, achieved through experience, training and educational aspects that are formally embedded within the EMS would facilitate in the formation of a positive environmental attitude (environmental concern) and the resulting personal norms (preferences for green products). Specific studies of whether such environment-friendly



attitudes and behavior might not only be constrained within the organization's premises but could also "spillover" into an individual's behavior such as the consumer product preferences or other consumer eco-friendly activities, have already been conducted, though in a rather preliminary and sometime exploratory in nature (Berger and Kanetkar, 1995 and Rondenelli and Vastag, 2000).

Specifically, this study intends to provide empirical evidence as to whether the level of employee involvement in the implementation of the EMS/ISO14001 by an organization would significantly affect the general environmental attitude of the employees and the extent to which the level of involvement would then has significantly spilled-over to the more general domain of environmental friendly consumer behavior?

#### **1.4 Research Objectives**

From the discussions above, the objectives of the present research are as follows:

- To determine the extent of which the level of employee involvement in the EMS could have spilled over in their preferences for buying eco-friendly products.
- To determine the extent ecological concern would mediate the relationship between employee involvement with EMS and their preferences for buying eco-friendly products.
- To determine the extent specific marketing elements such as the eco-label could moderate the relationship between employee ecological concern and their preferences for buying eco-friendly products.

#### **1.5 Research Questions**

In line with the objectives stated above, specific questions have been developed for this study:

- To what extent does the level of employee involvement in the EMS (organizational domain) could have spilled over in their preferences for buying eco-friendly products (private domain)?
- To what extent does ecological concern would mediate the relationship between employee involvement with EMS and their preferences for buying eco-friendly products?
- To what extent does perceptions of eco-label could moderate the relationship between employee ecological concern and their preferences for buying eco-friendly products?

## 1.6 Definition of Key Terms

Definitions and descriptions of terminologies use in the study are presented below. Further detailed discussions of these terminologies will be followed-up in chapter 2 and 3.

- **Environmental Management System (EMS):** A management system that attempts to addresses the environmental burden of an organization by identifying policies, procedures, and resources for implementing and maintaining effective environmental management system.
- **ISO14001:** A standard in the ISO14000 series that provides specifications for a complete and effective environmental management system.
- **Employee involvement:** The level of employee participation in information processing, decision making, training programs and reward system of an organization. It is operationalized by employee recognition of the opportunity

for involvement and endorsing it by actually putting involvement into practice in their day-to-day work routine.

- **Ecological Concern:** General attitude toward facts, one's own behavior, or others' behavior with consequences for the environment.
- **Environmental Knowledge:** Awareness and understanding about general or specific issues about the environment.
- **Environmental Attitude:** A learned predisposition to respond consistently favorable or unfavorable manner with respect to the environment
- **Eco-labels:** Eco-labels are indicators of the environmental performance of a product.
- **Purchase intention:** The probability that a person would gives preference to products having eco-friendly features over other traditional products in their purchase consideration.
- **Theory of Cognitive Dissonance:** An action-opinion theory which proposes that action can influence subsequent belief and attitude. This theory also assumes that people cannot tolerate inconsistencies and will work to eliminate or reduces it whenever it exist.
- **Spillover of Environmentally Responsible Behavior:** A phenomenon used to explain how the development of environment friendly behavior in one area has a positive effect on other behavior with the same environmental impact.

## **1.7 Significance of the Study**

Considering the above background discussions, the significance of this study can be briefly explained in four points:

### **i. Theoretical significance**

Thøgersen (1999, and 2004) and Thøgersen and Orlander (2003) have attempted to demonstrate that environmentally friendly behaviors are not independent of each other. They propose that general environmental values that people hold foster feeling of behavioral obligation and commitment in diverse setting, and when people start to act in an environmentally friendly way in one area, this behavior tends to spillover into other areas. Their study on spillover behavior has been preceded by earlier studies not only in environmentally related issues (Berger, 1997; Diekmann and Preisendorfer, 1998; Pickett, Kangun and Grove, 1993; Stern and Oskamp, 1987) but also in other organizational behavior settings (Broadbridge, 1999; Grunberg et al., 1998). Findings were rather diverse, with some studies showing a slight positive correlation while other results in having no correlation at all. Thøgersen (2004) concluded that such result was due to either weakness in research methods used or to some idiosyncratic constraints. He identified various prerequisites to this spillover phenomenon, and most seems to fit well within the framework of the implementation of the Environmental Management System under the ISO14001 certification and auditing process. These issues will be discussed further in Chapter 2 and 3.

A crucial aspect discussed by Thøgersen (2004) is the identification of the various environmentally responsible behavior categories (such as recycling, buying organic, transportation modes etc.). However, all of the previous studies

are limited to behavior categories within the individual or personal domain. The main contribution of this study would be the identification of an eco-behavior spillover phenomena occurring between two different domain settings; namely environmentally responsible behavior within the organizational setting (identified through employee involvement in EMS) and individual or personal setting (identified through individual consumer purchase behavior). The determination of such phenomena occurring between these two significantly different eco-behavior categories would not only have important consequences on existing theoretical foundation but would also potentially contribute to another more important aspect of behavior intervention efforts through the introduction of government policies promoting environmentally responsible behaviors (ERBs) for the benefit of advancing a more sustainable society overall.

Another significant contribution from this study would be the introduction of “perceptions of eco-labels” as a moderating variable and “ecological concern” as mediating variables; both of which have not been explicitly used in earlier model explaining the eco-behavior spillover phenomenon. The inclusion of these two variables will be discussed in detail in the preceding chapters.

## **ii. Organizational significance**

From the perspective of the organization implementing the EMS, one positive contribution could be the change in attitude of their employees toward increased environmental consciousness. If this were proven to be so, then this information could be used as a strategic tool to further enhance its corporate image through its improved corporate social responsibility. The implementation of strategic environmental management philosophy in an organization involves communicating with the customers and other stakeholders about the whole

company rather than just its products and the implementation of green technology in its manufacturing process. Research carried out in the USA into the components of a company's reputation, named environmental responsiveness, environmental self-regulation and waste minimization programs as 'of the highest importance' in determining a company's reputation (Peattie, 1995:225). Therefore in this study, the focal argument in the implementation of ISO14001 is that the organization not only produces products that are ecologically friendly through sustainable production processes, but also contribute in the development of an ethical citizens of the nation who are sensitive to the needs of the physical environment. This is in line with the government efforts to develop holistic human capital, mentioned in the 9<sup>th</sup> Malaysia Plan as;

...the internalization of positive and progressive attitudes, values and ethics through education, training and lifelong learning (p.237).

### **iii. Public Policy Implication**

By emphasizing the educational aspect of its implementation, the ISO 14001 could be one of the most systematically significant efforts to change attitude and values of people toward realizing a more environmentally responsible community. It could be a strong basis for government policy decisions; consistent with other effort taken in the process of sustainable community building. A comparison could be made with the experience of the adoption of the Quality Management System ISO 9000:2000 which was made compulsory among all government departments by the end of 2003 (Surat Pekeliling Kemajuan Perkhidmatan Awam Bilangan 2/2002). Presently, in the local scene, the implementation of EMS/ISO14001 is limited to business manufacturing concerns, which is apparently different from the situation in Japan,

for example, where its implementation is broaden to SMEs, public, education and service sectors (JACO, 2003). One limiting factor restricting the broadening of EMS to other sectors is the high cost involved in the certification process. However there is actually a misconception between what is an EMS and what is an ISO14001. Numerous organizations have been implementing EMS and reaping its eventual benefits (which include reduced cost), while not even being certified with ISO14001 (Rondinelli and Vastag, 2000).

#### **iv. Exploring a section of the Malaysia's Green Consumers Market**

The existence of the few studies concerning the marketing of green products and of green consumers within the Malaysian context (Nabsiah and Ismail, 2003a; Nabsiah and Ismail, 2003b; Perumal et al., 2004) would aptly describe the infant stage of which this new marketing idea is at. Even though the studies were descriptive in nature, it has open new possibilities for further research and enhances the effort it would take to understand the difficulties of implementing it within the local consumer market industry. Even though the concept of green marketing is very new, if not alien to Malaysian consumers, the existence of such consumer products with conscious environmental consideration have existed in local retail outlets for already sometime. A study done by Hult, Keillor and Hightower (2000) even found that the willingness of Malaysian consumers to accept products with environmental friendly features have been very encouraging, even in comparison to their French counterparts.

However rather than just attempting to describe the Malaysian consumers' response to existing green products in the market, this study would attempt to revert to an earlier stage in the consumer behavior process, and that is of the formation of the green attitude and behavior, and how an organization

could contribute to its development, (not only through its marketing communication strategy but also) through individual involvement in the implementation of a pervasive and comprehensive Environmental Management System. Thus, rather than passively reacting to the possible emergence of green consumers and their demand for green products, a business organization should be having a more proactive stance in dealing with the existence of this potentially new market segment, as suggested rightly by Peattie (2001:197);

Instead of acting as hunters, aggressively trying to benefit from the emergence of green consumers by targeting them, they could act more like gamekeepers who nurture and facilitate growth in the population of green consumers.

If the implementation of the EMS is found to have actually influence the attitude and behavior of individual employees, then a significant portion of the consumer market (bearing in mind the sharp increase in the numbers of organizations attempting to implement the EMS/ISO14001 in this country and throughout the world) that would react positively to product and services with environment friendly features have been identified. A more conscious and strategic marketing effort could then be carried out in order to take opportunity of this market niche.

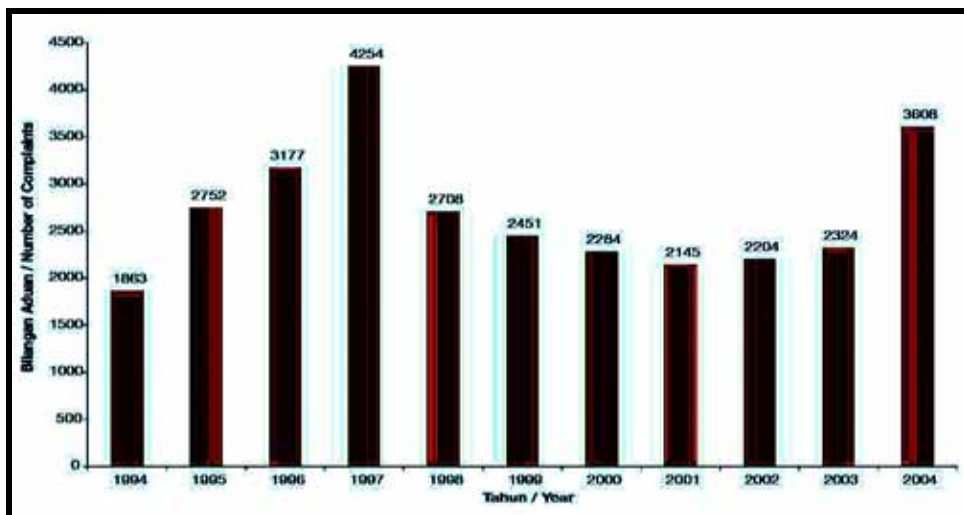
### **1.8 A Closing Remark**

There will always be, however, skeptics to the emergence of green marketing. A sinister question frequently asked is “Could a Green Business be carried out in a Gray World?” (Plant and Plant, 1991). With the slow improvement shown in various public environmental programs, such as recycling and color bins, it is no doubt these skeptics has a strong case to argue. Is it worth for an organization to invest in aggressive green marketing effort when finding the ‘green consumers’ seems very elusive indeed (Peattie, 2001). However based on the aforementioned environmental scenario, strong and steady commitment shown by the government, the ever increasing number of high

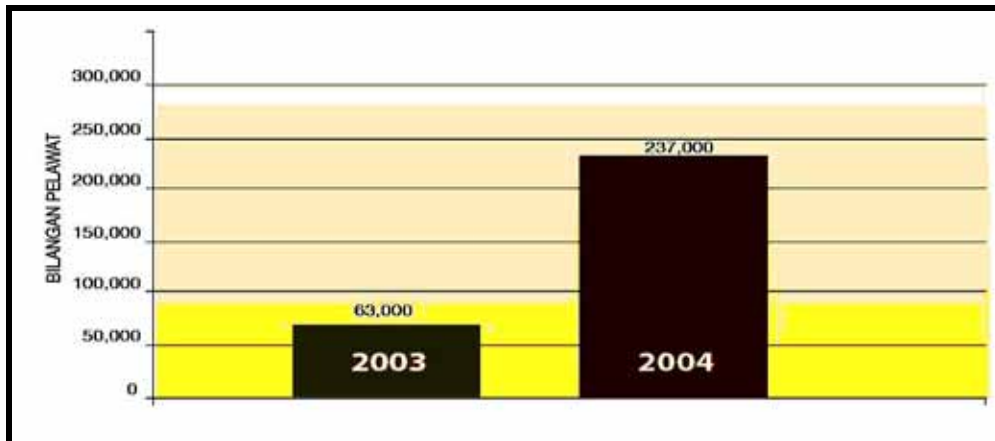


profile environmental issues in the media and aggressive response from the public and various NGOs (Figure 1.2 and Figure 1.3), it is just a matter of time when the levels of awareness and concern has no other option but to improve. The question only lies whether this concern could be translated into action, in the form of preferences for purchasing products with environment friendly features.

Though some people might brush aside these green marketing initiatives as wishful thinking, farsighted leaders have reacted otherwise. The Malaysian's former Prime Minister had envisioned a developed nation that could ensure invaluable natural resources will not be wasted; the land remains productive and fertile; the atmosphere clear and clean; the water unpolluted; the forest resources capable of regeneration, able to yield the need of the national development; the beauty of the land not desecrated for its own sake and for its economic advancement (Mahathir, 1991, page 9). This vision is further cemented by strengthening it with religious belief; ensuring a balanced



*Figure 1.2* Numbers of complaints from public.  
(Source: Laporan Jabatan Alam Sekitar, 2004)



*Figure 1.3* Numbers of visitors at Department of Environment website.  
(Source: Laporan Jabatan Alam Sekitar, 2004)

approach to the nation's economic progress through spiritual development and assimilation of Islamic values (Prime Minister of Malaysia; [www.pmo.gov.my](http://www.pmo.gov.my), accessed on January 4, 2007).

In a society with economic stability and confidence, the increasing environmental conscience among its general population will eventually result in preferences given to products with environment friendly features. However such studies associating the concern for the environment as being exclusively related to more developed countries (Inglehart, 1995) have proven to be inconclusive as even in many instances countries (society) with high GNP has also shown a negative relation to environmentalism (Dunlap and Mertig, 1997). In a more recent study using data from the International Social Survey Program (ISSP), Franzen (2003) concur that wealth does have a strong correlation to environmental concern, but more importantly, it is the rate of economic growth that would remain as the stronger prerequisite for sustaining high environmental concern among its citizens.

Such experience is elucidated by the founder of B-Life 21, Tadahiro Mitsuhashi (2000:5-6) as such:

In countries where the economy is not yet fully developed, customers have strong tendency to place value for money before concern for environment when purchasing products. Then, as their economy approaches a level of maturity, consumer's thinking subtly begins to change. At the personal level, although consumers believe they should buy products that are environmentally friendly even if they are a little more expensive, they still tend to choose products on price whenever they go to the shopping center. In spite of this, consumers from mature countries have come to their senses and are now showing clear concerns for their environment in their actions. These are the characteristics of the 21st century's new green consumer.

Thus, whatever attempt is taken, however large its contribution could be, would not compare to the effort of finding effective ways to determine the existence of tomorrow; of which is determined by the attitude and belief that we carry in ourselves, and by the way we live our lives today. Hopefully the findings from this humble study would contribute to undeniably the most importance issue of our lifetime: maintenance a sustainable world for our future generation.

## **CHAPTER 2**

### **LITERATURE REVIEW**

#### **2.1 Spillover of Environmentally Responsible Behavior Phenomenon**

Spillover of eco-behavior happens, when performing an environmentally responsible behavior (such as participating in a recycling program for household waste) causes an increase in the salience of attitude towards other consumer activities targeting the same environmental problem (such as avoiding excessive packaging). Operationally the spillover of environmentally responsible behavior is measured through the strength of correlation between these specific attitude and behaviors (Thøgersen and Olander, 2003). This phenomenon is also used to explain how the development of environmentally friendly behavior in one area has a positive (or negative) effect on other behavior with the same environmental impact (Bratt, 1999; Thøgersen, 1999).

Most of previous studies have discussed this phenomenon using different environmentally responsible behavior categories all of which were within the personal or individual private-life setting (Bratt, 1999; Ebreo and Vining, 2001; Stern and Oskamp, 1987; Thørgesen, 1999; Thørgesen and Olander; 2003). These studies thus far seem to conclude that the relationship between the tested behavior categories as low or in some cases negligible. Some of the reasons given for such outcomes are fallibility of measures and the influence of other idiosyncratic constraints which are sometimes situation specific (Thøgersen, 2004).

##### **2.1.1 Spillover of ERB in an Organizational Setting**

An assumption made in this research that contributed to the discouraging outcome is that the educational and developmental aspect that would be crucial in the source behavior has to be made more explicit and intentional. The source behavior category should have contributed strongly in the development of the attitude necessary

for the spillover behavior to be meaningful. For this reason it is suggested that a behavior category from an organizational setting should be introduced to ensure the structured and consistent effort of developing the necessary attitude that could be the foundation of performing another behavior category (target behavior).

Only two serious studies have been found in reliable journals and both seem to be very limited or have weaknesses in the instrument design. Rondenelli and Vastag (2000) in their study note that one of the strongest impacts of ISO14001 certification and the adoption of a strengthen EMS was behavioral. The preparation, registration and surveillance process during the ISO14001 certification process was thought to have made most employees more aware of environmental aspects, regulations, and impacts, not only at work, but at home and in the community. However their information was limited to that obtained from a handful of managers from just one company and with no specific behavioral construct that could explain the specific elements of the EMS that could have significantly contribute to employee environmental concern. Another study by Berger and Kanetkar (1995) did use what they termed as “workplace experiences” (or organizational setting as referred to this study) when discussing this organizational domain and identified two psychological construct (perceived consumer efficacy and conviction) to measure the influence of the EMS on the individual employees; however the items used in their research instrument seemed not to reflect such organizational setting that could have then be identified as the source behavior in the eventual spillover process.

Taking the above consideration, this study proposes a well established behavioral concept of **employee involvement** (Kearney, 1997; Lawler, 1986, 1992, 1996; Vandenberg et al, 1999) as a behavior category at an individual behavior level within an organizational setting as the source behavior or the independent variable. Employee involvement with the EMS (ISO14001) was chosen since it fits well with the

above mentioned assumptions and will be discussed in detail in the following sections. The target behavior (environmentally responsible behavior) would be employee intention to purchase environmental friendly products; with employee environmental concern as a mediating variable.

### **2.1.2 The Underpinning Theory: The Theory of Cognitive Dissonance**

Festinger's (1957) cognitive dissonance theory assumes that people cannot tolerate inconsistencies and will work to eliminate or reduce it whenever it exists. This theory has obviously stood the test of time in that it is mentioned in most general and social psychology textbook today. According to the theory, a state of "dissonance" will be aroused whenever a person simultaneously has two cognitions that are psychologically inconsistent. Cognition is a thought, a piece of knowledge, or a belief. Cognition also encompasses knowledge about attitudes, values, behavior, other people, ourselves, general knowledge, or any other target (Worchel, et al, 2000).

Dissonance cognitions are inconsistent or incompatible with each other or they psychologically contradict one another. For example, the cognition "Car pooling is good" and "I have to drive my Volvo to office" are dissonant. Another example of dissonant cognition is "Energy saving bulbs are efficient and longer lasting" and "Traditional bulbs are cheaper". The pairs of cognitions include one of it to be cognition about the perceiver's personal actions. This is an important element of the theory and would be one of the basis of this study's research framework and will be elaborated further below.

As mentioned earlier, since the state cognitive dissonance is an unpleasant one, the individual will be motivated to reduce the dissonance in some way and achieve greater "consonance" (consistency). This reduction of dissonance between an act and an attitude can take place in a number of ways. Firstly, this can be done by changing one of the cognitions so that it is no longer in dissonant with the other. For instance,

using the earlier example of dissonance arising from “efficiency of energy saving bulb” and “cheaper traditional bulbs”, the person might change his earlier cognition about the traditional bulb by stating that “traditional bulb cost more in the long run”.

Secondly, another dissonance reduction strategy is to think of other cognitions that are consonant or consistent with one of the dissonant ideas. By increasing consonant cognitions, one increases its value and thereby reduces the amount of dissonance experienced. Again referring to the above example, to support the cognition “purchasing energy saving bulb is better” a new cognition is added to the psychological mind-set, that is, “the product is endorsed by a trustworthy eco-label”.

The third dissonance reduction tactic is to alter the importance of one of the discrepant cognitions. For example, “the energy saving bulb do not flicker and is 4 times brighter”. This additional cognition reduces the importance of “the much cheaper price of traditional bulb” cognition and thus lower the amount of dissonance experienced.

Another very important aspect of the theory of Cognitive Dissonance is that it is somewhat counterintuitive and, in fact, fits into a category of counterintuitive social psychology theories sometimes referred to as action-opinion theories. The fundamental characteristic of action-opinion theories is that they propose that actions can influence subsequent belief and attitude. This is counterintuitive in that it would seem logical that our actions are the result of our belief/attitudes, not the cause of them. However, as found in the wisdom of Aristotle’s statement that “men acquire a particular quality by consistently acting in a particular way” this would give another light to the matter. In fact, there is considerable evidence now to support the view that attitude change is best accomplished after exposure to a situation in which behavior is first change directly. If behavior is changed, a change in attitude will usually follow.

The theory of Cognitive Dissonance states that our attitudes are often rationalizations for the things that we have already done. For example the person who has given up smoking through a long and agonized process becomes the strongest critics of anyone else who smokes. The same could be said of a person who focuses his or her energy at the workplace, where he or she spends majority of his or her time, and is explicitly or implicitly reinforced with codes of behavior that emphasizes the importance of minimizing the organization's environmental impact. Such a person would surely have developed significant perspective of other environment-related issues in general. These examples actually depict a process in which a person's behavior is followed by substantial attitude change. It also assumes the presence of pressures toward consistency between attitude and behavior. That people's behavior actually does determine their attitudes no matter how unthinking the behavior was (Taylor, et al, 2003).

### **2.1.3 Operationalizing the Theory of Cognitive Dissonance in Spillover of Environmentally Responsible Behavior.**

The results of the research on dissonance theory has provided a knowledge base that makes it possible to develop measures for changing people's attitudes and behavior by targeting their inner contradictions (Frey and Gaska, 1993). This would also be postulated to have a pertinent contribution to the area of environmental attitudes and behavior as well.

Since several studies have concluded that there is an inconsistency between environmental attitudes and behavior (Scott and Willits, 1994; Mainieri, Barnett, Valdero, Unipan, and Oskamp, 1997), we might expect that people develop such cognitive dissonance in regard to their environmental behavior. If a conflict between environmental attitudes and behavior actually does lead to a perceived dissonance, then a strategy to reduce this dissonance could be to channel this environmental concern to a specific